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### The Status of *Hybolicus* Berlese, 1913 and *Oehserchestes* Jacot, 1939 (Acari: Acariformes: Endeostigmata)

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#### ABSTRACT

The status of *Hybolicus* Berlese, 1913 and *Hybolicus* sensu Theron, 1974 are reviewed. The synonymy *Hybolicus* Berlese (= *Lordalychus* Grandjean, 1939) is justified. The redescription of *Oehserchestes* Jacot, 1939 as *Hybolicus* sensu Theron, 1974 necessitates several new nomenclatural combinations: *Oehserchestes* (= *Hybolicus* sensu Theron), *Oehserchestidae* n. fam. (= *Hybolicidae* sensu Theron, in part). *Grandjeanicidae* n. fam. is based on *Grandjeanicus* Theron, 1974.

The two endeostigmatid genera *Hybolicus* Berlese, 1913 and *Oehserchestes* Jacot, 1939, are each very poorly known. The type species of each of these genera (*H. ornatus* (Berlese, 1904) and *O. humicolus* (Jacot, 1938)) were based on very scanty descriptions, and the type series were not restudied until recently.

Berlese created the genus *Hybolicus* in 1913 with *Alicus ornatus* Berlese, 1904 as the type species, and described *H. flabelliger* as the second nominate species. A third species, *Hybolicus piliger*, was very briefly described by Berlese in 1917. Grandjean (1939, p. 107) noted the similarity of his new genus *Lordalychus* to *Hybolicus* based on Berlese's figures, but not on an examination of the type material. Grandjean placed *Lordalychus* and *Hybolicus* in a new family, *Lordalychidae* (1939, p. 4).

Until recently the two genera were simply carried in the literature (Thor and Willmann, 1941; Radford, 1950; Baker and Wharton,

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1952; Krantz, 1970), and only *Lordalychus peraltus* Grandjean, 1939, was considered to be adequately described. However, Theron, 1974, gave detailed descriptions of three new species from South Africa which he placed in *Hybolicus*. Unfortunately, some of Theron's other proposed nomenclatural arrangements are contraindicated by the International Code of Zoological Nomenclature, 1964. Theron (1974, p. 306) suggested: "that the species *H. ornatus* be transferred to the genus *Lordalychus* and that *H. flabelliger* be considered types species of the genus *Hybolicus*."

Theron substantially repeated this proposal in a more recent work (Theron and Ryke, 1975, p. 631: "Theron, 1974, erected the family Hybolicidae to accommodate the latter genus and he also suggested that the species *Hybolicus ornatus* Berlese, 1905, be transferred to the genus *Lordalychus*"). Examination of the type material of *Hybolicus ornatus* confirms Theron's assessment that *H. ornatus* is congeneric, but not conspecific with *Lordalychus peraltus*. Since *H. ornatus* is the type species of *Hybolicus* and *Hybolicus* predates *Lordalychus*, then *Lordalychus* is the junior subjective synonym of *Hybolicus* (see Article 67, paragraph k, "Union of General," ICZN, 1964). Examination of the type material of *Hybolicus flabelliger* confirms Theron's assessment that *H. flabelliger* is neither congeneric nor confamilial with *H. ornatus*. Accordingly, the generic name *Hybolicus* should not be used for *flabelliger* (Article 23, paragraph e, ICZN, 1964) and its three congeneric species described by Theron since *Hybolicus* sensu Theron is the junior homonym of *Hybolicus* Berlese. Furthermore, the family name Hybolicidae Theron, 1974 should be rejected (Article 11, paragraph e, ICZN, 1964) because it is based on a homonym.

Although Theron clearly designated Berlese's *flabelliger* as the type species for the group of four congeneric species (*flabelliger*, *arboriger*, *dorysetatus*, and *spathatus*), he did not use a valid generic name for this cluster. A comparison of the type material of *Oehserchestes humicolus* (Jacot, 1938), with Theron's excellent description of a new species, *Hybolicus spathatus*, indicates that *Hybolicus spathatus* should be considered as the junior subjective synonym of *O. humicolus*. Consequently, the generic name *Oehserchestes*, and the new family level name, *Oehserchestidae*, are each available for this group of four species. The differences in tarsus I as well as differences in the body setae warrant a subdivision of *Oehserchestes* into two subgenera, with *O. humicolus* and *dorysetatus* in one group and *arboriger* and *flabelliger* in a second group.

Based on a study of several undescribed species that are clearly referable to the genus *Grandjeanicus* Theron, 1974, it is this worker's opinion that *Grandjeanicus* and *Oehserchestes* are not confamilial. The bizarre morphology of tarsus I of *Grandjeanicus* species is unique among Endeostigmata, and is only approached in its complexity by the configuration of tarsus I of sphaerolichids. The hypertrophied seta of tarsus I of *Grandjeanicus* (cf. Theron, 1974, fig. 55) is similar to the modified prodorsal sensory setae of *Nanorchestes* species.

The preceding nomenclatural considerations are presented in an hierarchical form in the following listing. New supraspecific categories are diagnosed in the Appendix.

#### Lordalycidae Grandjean, 1939

Type genus: *Hybalicus* Berlese, 1913, not *Hybalicus* sensu Theron, 1974

Nominate Genus

*Hybalicus* Berlese, 1913 (= *Lordalycus* Grandjean, 1939) new synonymy

Type species: *Alicus ornatus* Berlese, 1904

Nominate species

1. *H. fusciniulus* (Theron, 1975) new combination
2. *H. longipilus* (Theron, 1975) new combination
3. *H. multifurcatus* (Theron, 1975) new combination
4. *H. ornatus* (Berlese, 1904)
5. *H. peraltus* (Grandjean, 1939) new combination
6. *H. potchensis* (Theron, 1975) new combination
7. *H. thrombidius* (Theron, 1975) new combination

#### Oehserchestidae, new family

(=Hybalicidae Theron, 1974, in part)

Type genus: *Oehserchestes* Jacot, 1939

Nominate Genus

*Oehserchestes* Jacot, 1939 (= *Coccorchestes* Jacot, 1938 nom. praeocc.) (= *Hybalicus* sensu Theron, 1974)

Type species: *Coccorchestes humicolus* Jacot, 1938

Subgenus *Oehserchestes* (*Oehserchestes*) Jacot, 1939, new status

Type species: *Coccorchestes humicolus* Jacot, 1938

Nominate species

1. *O. (O.) dorysetatus* (Theron, 1974) new combination

2. *O. (O.) humicolus* (Jacot, 1939)  
 (= *Hybolicus spathatus* Theron, 1974) new synonymy

Subgenus *Oehserchestes* (*Theronicus*) new subgenus

Type species: *Hybolicus arboriger* Theron, 1974

Nominate species

1. *O. (T.) arboriger* (Theron, 1974) new combination
2. *O. (T.) flabelliger* (Berlese, 1913) new combination

Grandjeanicidae, new family

Type genus: *Grandjeanicus* Theron, 1974

Nominate Genus

*Grandjeanicus* Theron, 1974

Type species: *Grandjeanicus uncus* Theron, 1974 (monotypical)

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## APPENDIX

### Diagnoses of New Supraspecific Categories

#### OEHSERCHESTIDAE, new family

Small mites, 200-300  $\mu$  in length. Chelicerae chelate, dentate, rutellum well developed. One pair of prodorsal trichobothria present, integumental surface striate, body setae globose-spatulate, or dendritic. Three pairs of genital papillae present. Tarsus I normal in shape, tapered proximally to pretarsus; pretarsus I present with an empodial claw, paired claws absent. Pretarsi II-IV tradactylate, paired claws asymmetrical, empodium claw like. Femur III subdivided, genu IV with at least one solenidion.

Type genus: *Oehserchestes* Jacot, 1939.

#### *Oehserchestes* (*Oehserchestes*) Jacot, 1939, new status

Body setae globose-spatulate; tarsus I without a long stylettiform seta; femur II entire; tarsus I with less than six solenidia.

Type species: *Coccorchestes humicolus* Jacot, 1938.

### **Oehserchestes (Theronicus) new subgenus**

Body setae dendritic; tarsus I with a long stylettiform seta; tarsus I with more than 10 (usually 14) solenidia; femur II divided.

Type species: *Hybalicus arboriger* Theron, 1974.

### GRANDJEANICIDAE, new family

Medium sized mites, 400-600  $\mu$  in length. Chelicerae chelate, dentate, rutellum well developed. One pair of prodorsal trichobothria present, integumental surface punctate, posterior body setae truncate. Three pairs of genital papillae present. Tarsus I unusual in shape, truncate proximally, pretarsus absent, an hypertrophied seta present, almost as long as leg I. Pretarsi II-IV tridactylate, paired claws symmetrical, empodium claw like. Femur III entire, genu IV devoid of solenidia.

Type genus: *Granjeanicus* Theron, 1974.

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